



**QUERI currently focuses on ten conditions that are prevalent and high-risk among veteran patients: chronic heart failure, colorectal cancer, diabetes, HIV/ Hepatitis, ischemic heart disease, mental health, polytrauma and blast-related injuries, spinal cord injury, stroke, and substance use disorders.**

## Stroke

Stroke is the third leading cause of death in the United States, accounting for more than 1 of every 15 deaths in the United States. More than 700,000 persons experience a new or recurrent stroke each year, resulting in an approximated cost of \$58.6 billion. On average in this country, every 45 seconds an American has a stroke, every 3 minutes someone dies of stroke, and 15%-30% of stroke survivors have serious, long-term disability.

The Veterans Health Administration (VHA) estimates that 15,000 veterans are hospitalized for stroke each year, with new strokes costing an estimated \$111 million for acute inpatient care, \$75 million for post-acute inpatient care, and \$88 million for follow-up care longer than 6 months post-stroke.

### Stroke Quality Enhancement Research Initiative

The mission of the Stroke Quality Enhancement Research Initiative (Stroke-QUERI) is to employ the QUERI process (see back page) to reduce stroke risk and maximize the functional status and quality of life of veterans with stroke by systematically implementing clinical research findings and evidence-based guidelines into routine clinical practice.

Stroke-QUERI was established in March 2004 and has four major goals : 1) To improve overall compliance with the

Department of Veterans Affairs and the Department of Defense (VA/DoD) clinical practice guidelines for the management of stroke rehabilitation; 2) To ensure that a plan for rehabilitation is considered for all stroke patients; 3) To reduce the risk of stroke recurrence by assuring appropriate management of stroke risk factors; and 4) To reduce the physical, emotional, and social burden of depression after stroke.

### Stroke-QUERI Projects and Findings

Following are some examples of current Stroke-QUERI projects that focus on health issues of critical importance to veterans who have suffered a stroke or are at risk of stroke.

#### Implementing evidence in the detection and treatment of post-stroke depression

In an effort to reduce the physical, emotional, and social burden of post-stroke depression, this 3-year project is being conducted at the Indianapolis VAMC and Gainesville

VAMC, and aims to improve the quality of depression care provided to veterans with stroke. The goal of this project is to partner with VA clinicians and managers involved in the outpatient care of veterans with recent stroke to improve the detection and treatment of post-stroke depression.

The study's primary goal is to extend the use of the current Computerized Patient Record System (CPRS)-based depression screener in VA primary care clinics to target veteran stroke survivors following-up in VA Primary Care (PC) or in VA Neurology clinics within 6 months of stroke. Team members at each site are identifying colleagues from these clinics and other related clinical areas who are interested in working together and having input into how veterans with stroke will be screened and treated for depression after stroke at their facility.

The teams are developing a strategy to identify recent stroke survivors at the time of outpatient follow-up in either PC or Neurology clinics and to prompt screening

### The Stroke-QUERI Executive Committee

Each QUERI Executive Committee is led by a research expert and a clinician. The research coordinator for Stroke-QUERI is **Pamela Duncan, PhD**, and the clinical coordinator is **Linda Williams, MD**. This Executive Committee includes experts in both the field of stroke and implementation science. The member ship of the Stroke-QUERI Executive Committee includes: David Matchar, MD (Chair); Bradley Doebbeling, MD, MSc; Thomas Kent, MD; Sarah Krein, PhD, RN; Brian Mittman, PhD; Lynnette Nilan, RN, EdD; Eugene Oddone, MD; Robert Ruff, MD; Marita Titler, PhD, RN, FAAN; Ellen Magnis, MBA; Barbara Sigford, MD; and Don and Jan Prether.

using the existing CPRS-based depression screener. The teams also are developing a strategy for fostering effective treatment of veterans with post-stroke depression.

### **Additional Stroke-QUERI Findings and New Projects**

Another area of research across the continuum of stroke care is the management of stroke risk factors. In order to engage and activate veterans in preventing stroke, Stroke-QUERI has received funding for a patient-centered study, “Disseminating Stroke Prevention Materials to Veterans: The Development of a Direct-to-Consumer (DTC) Implementation Strategy.”

The objective of this project is to educate veterans about stroke risk factors and motivate them to request additional information using the recognizable character of “Sarge” from the Beetle Bailey cartoon. Project members worked with the VA programs – My HealtheVet, Managing Obesity/Overweight for Veterans Everywhere (M.O.V.E.), VISNs 8 and 11, the Malcolm Randall and Richard L. Roudebush VAMCs, facility Quality Performance Managers, and facility Associate Chief of Staff for Education, as well as the American Stroke Association/American Heart Association, and the National Stroke Association to create a dissemination plan and the educational materials to be distributed to those individuals at risk for second stroke.

Stroke-QUERI investigators also are working on a Rapid Response Project to address provider and patient barriers to anticoagulation.

The program consists of a physician manual, and for patients, a video, a personnel worksheet, and education booklets that are specific to four levels of stroke risk (low,

medium, high, and very high) that detail the risk and benefits of therapy for stroke prevention in atrial fibrillation (AF), as described by the current American College of Chest Physicians recommendations.

In this local demonstration implementation project, potential patients will be contacted by telephone to determine if they know they have AF and to obtain consent, and a second telephone call will be arranged. Enrolled patients then will be mailed the clinical decision making tool kit.

The outcomes of interest for this project include: 1) number of patients who complete the decision tool kit, 2) satisfaction, 3) knowledge/ expectations, 4) decisional conflicts, and 5) number of patients who make an appointment with their physician in a 30 day period. The decision making tool is patient-focused, and also has the potential to be implemented in the VA’s care coordination and telehealth programs for veterans.

## **THE QUERI PROCESS**

QUERI utilizes a six-step process to diagnose gaps in performance and identify and implement interventions to address them:

- 1)** Identify high-risk/high volume diseases or problems;
- 2)** Identify best practices;
- 3)** Define existing practice patterns and outcomes across VA and current variation from best practices;
- 4)** Identify and implement interventions to promote best practices;
- 5)** Document that best practices improve outcomes; and
- 6)** Document that outcomes are associated with improved health-related quality of life.

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**Stroke-QUERI direct weblink: [www1.va.gov/stroke-queri](http://www1.va.gov/stroke-queri)**